exceed 2.2 percent by weight; *Provided*, That:

(1) The hops extract is added to the wort before or during cooking in the manufacture of beer.

(2) The label of the hops extract specifies the presence of the hexane and provides for the use of the hops extract only as prescribed by paragraph (b)(1) of this section.

§ 173.275 Hydrogenated sperm oil.

The food additive hydrogenated sperm oil may be safely used in accordance with the following prescribed conditions:

(a) The sperm oil is derived from rendering the fatty tissue of the sperm whale or is prepared by synthesis of fatty acids and fatty alcohols derived from the sperm whale. The sperm oil obtained by rendering is refined. The oil is hydrogenated.

(b) It is used alone or as a component of a release agent or lubricant in bakery pans.

(c) The amount used does not exceed that reasonably required to accomplish the intended lubricating effect.

§ 173.280 Solvent extraction process for citric acid.

A solvent extraction process for recovery of citric acid from conventional *Aspergillus niger* fermentation liquor may be safely used to produce food-grade citric acid in accordance with the following conditions:

(a) The solvent used in the process consists of a mixture of *n*-octyl alcohol meeting the requirements of § 172.864 of this chapter, synthetic isoparaffinic petroleum hydrocarbons meeting the requirements of § 172.882 of this chapter, and tridodecyl amine.

(b) The component substances are used solely as a solvent mixture and in a manner that does not result in formation of products not present in conventionally produced citric acid.

(c) The citric acid so produced meets the specifications of the ''Food Chemicals Codex,'' 3d Ed. (1981), pp. 86–87, which is incorporated by reference (Copies may be obtained from the National Academy Press, 2101 Constitution Ave. NW., Washington, DC 20418, or may be examined at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal__register/code__of__federal__regulations/ibr__locations.html.*), and the polynuclear aromatic hydrocarbon specifications of § 173.165.

(d) Residues of *n*-octyl alcohol and synthetic isoparaffinic petroleum hydrocarbons are removed in accordance with good manufacturing practice. Current good manufacturing practice results in residues not exceeding 16 parts per million (ppm) *n*-octyl alcohol and 0.47 ppm synthetic isoparaffinic petroleum hydrocarbons in citric acid.

(e) Tridodecyl amine may be present as a residue in citric acid at a level not to exceed 100 parts per billion.

[42 FR 14491, Mar. 15, 1977, as amended at 49 FR 10106, Mar. 19, 1984]

§ 173.290 Trichloroethylene.

Tolerances are established for residues of trichloroethylene resulting from its use as a solvent in the manufacture of foods as follows:

Decaffeinated ground coffee.	25 parts per million.
Decaffeinated soluble (instant) coffee extract.	10 parts per million.
Spice oleoresins	30 parts per million (provided that if residues of other chlorinated solvents are also present, the total of all residues of such solvents in spice oleoresins shall not exceed 30 parts per million).

Subpart D—Specific Usage Additives

§ 173.300 Chlorine dioxide.

Chlorine dioxide (CAS Reg. No. 10049–04–4) may be safely used in food in accordance with the following prescribed conditions:

(a)(1) The additive is generated by one of the following methods:

(i) Treating an aqueous solution of sodium chlorite with either chlorine gas or a mixture of sodium hypochlorite and hydrochloric acid.

(ii) Treating an aqueous solution of sodium chlorate with hydrogen peroxide in the presence of sulfuric acid.

(iii) Treating an aqueous solution of sodium chlorite by electrolysis.

(2) The generator effluent contains at least 90 percent (by weight) of chlorine dioxide with respect to all chlorine species as determined by Method 4500–ClO_2 E in the ''Standard Methods for the Examination of Water and Wastewater,'' 20th ed., 1998, or an equivalent method. Method 4500–ClO_2 E (''Amperometric Method II'') is incorporated by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from the Center for Food Safety and Applied Nutrition (HFS–200), Food and Drug Administration, 5100 Paint Branch Pkwy., College Park, MD 20740, or the American Public Health Association, 800 I St. NW., Washington, DC 20001–3750. You may inspect a copy at the Center for Food Safety and Applied Nutrition's Library, 5100 Paint Branch Pkwy., College Park, MD, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal__register/code__of__federal__regulations/ibr__locations.html.*

(b)(1) The additive may be used as an antimicrobial agent in water used in poultry processing in an amount not to exceed 3 parts per million (ppm) residual chlorine dioxide as determined by Method 4500–ClO_2 E, referenced in paragraph (a)(2) of this section, or an equivalent method.

(2) The additive may be used as an antimicrobial agent in water used to wash fruits and vegetables that are not raw agricultural commodities in an amount not to exceed 3 ppm residual chlorine dioxide as determined by Method 4500–ClO_2 E, referenced in paragraph (a)(2) of this section, or an equivalent method. Treatment of the fruits and vegetables with chlorine dioxide shall be followed by a potable water rinse or by blanching, cooking, or canning.

[60 FR 11900, Mar. 3, 1995. Redesignated at 61 FR 14245, Apr. 1, 1996, as amended at 61 FR 14480, Apr. 2, 1996; 63 FR 38747, July 20, 1998; 65 FR 34587, May 31, 2000; 70 FR 7396, Feb. 14, 2005]

§ 173.310 Boiler water additives.

Boiler water additives may be safely used in the preparation of steam that will contact food, under the following conditions:

(a) The amount of additive is not in excess of that required for its functional purpose, and the amount of steam in contact with food does not exceed that required to produce the intended effect in or on the food.

(b) The compounds are prepared from substances identified in paragraphs (c) and (d) of this section, and are subject to the limitations, if any, prescribed:

(c) List of substances:

Substances	Limitations
Acrylamide-sodium acrylate resin	Contains not more than 0.05 percent by weight of acrylamide monomer.
Acrylic acid/2-acrylamido-2-methyl propane sulfonic acid copolymer having a minimum weight average molecular weight of 9,900 and a minimum number average molecular weight of 5,700 as determined by a method entitled ''Determination of Weight Average and Number Average Molecular Weight of 60/40 AA/AMPS'' (October 23, 1987), which is incorporated by reference in accordance with 5 U.S.C. 552(a). Copies may be obtained from the Center for Food Safety and Applied Nutrition (HFS–200), Food and Drug Administration, 5100 Paint Branch Pkwy., College Park, MD 20740, or may be examined at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal__register/code__of__federal__regulations/ibr__locations.html.*.	Total not to exceed 20 parts per million (active) in boiler feedwater.
Ammonium alginate.	
Cobalt sulfate (as catalyst).	
1-hydroxyethylidene-1,1-diphosphonic acid (CAS Reg. No. 2809–21–4) and its sodium and potassium salts.	
Lignosulfonic acid.	
Monobutyl ethers of polyethylene-polypropylene glycol produced by random condensation of a 1:1 mixture by weight of ethylene oxide and propylene oxide with butanol.	Minimum mol. wt. 1,500.